Multiple choice:

1. In the corrosion of iron, which of the following is the anode? Which is the cathode?
   1. Iron, any impurity deposited on the iron
   2. Any impurity deposited on the iron, iron
   3. Iron, oxygen
   4. None of the above
2. Corrosion can be prevented by
   1. Painting the object
   2. Spraying the object with water
   3. Avoiding galvanization
   4. Cathodic protection
   5. None of the above
   6. Both a and d
3. Galvanizing is a process in which
   1. Iron is protected from rusting
   2. Iron is covered with a protective layer of potassium
   3. Iron protects other metals from rusting
   4. Iron is covered with a protective layer of zinc
   5. Two of the above
   6. All of the above

Short Answer:

1. Describe the process of cathodic protection, and why it must be done a certain way.
2. What is a major drawback to cathodic protection?

ANSWERS:

Multiple choice

1. A
2. F
3. E

Short Answer

1. Cathodic protection is a process by which an iron object is protected from oxygen in the air, and is therefore protected from corroding. A more reactive metal is attached to the iron object, acting as an anode and prevents the iron from reacting with oxygen until that metal has not fully reacted (corroded). The metal must be more reactive than iron because if it is less reactive and is scratched, it can speed up the corrosion of iron. A less reactive metal covering will act as a cathode and allow the oxidization of iron to happen faster.
2. The protective layer on the iron does not completely cover the iron since it is slowly being destroyed by oxidization. Therefore, the protective layer must be replaced periodically to continuously protect the iron.